



**United States  
Department of  
Agriculture**

**Agricultural  
Marketing  
Service**

**Fruit and  
Vegetable  
Division**

**Processed  
Products  
Branch**

# **United States Standards for Grades of Frozen Field Peas and Frozen Black-Eye Peas**

**Effective date October 15, 1996**

This is the fourth issue, of the United States Standards for Grades of Frozen Field Peas and Frozen Black-Eye Peas published in the **FEDERAL REGISTER** of September 12, 1996 (61 FR 48066) to become effective October 15, 1996. This issue supersedes the third issue, which has been in effect since December 7, 1995.

Voluntary U.S. grade standards are issued under the authority of the Agricultural Marketing Act of 1946, which provides for the development of official U.S. grades to designate different levels of quality. These grade standards are available for use by producers, suppliers, buyers, and consumers. As in the case of other standards for grades of processed fruits and vegetables, these standards are designed to facilitate orderly marketing by providing a convenient basis for buying and selling, for establishing quality control programs, and for determining loan values.

The standards also serve as a basis for the inspection and grading of commodities by the Federal inspection service, the only activity authorized to approve the designation of U.S. grades as referenced in the standards, as provided under the Agricultural Marketing Act of 1946. This service, available as on-line (in-plant) or lot inspection and grading of all processed fruit and vegetable products, is offered to interested parties, upon application, on a fee-for-service basis. The verification of some specific recommendations, requirements, or tolerances contained in the standards can be accomplished only by the use of on-line inspection procedures. In all instances, a grade can be assigned based on final product factors or characteristics.

In addition to the U.S. grade standards, grading manuals or instructions for inspection of several processed fruits and vegetables are available upon request for a nominal fee. These manuals or instructions contain detailed interpretations of the grade standards and provide step-by-step procedures for grading the product.

Grade standards are issued by the Department after careful consideration of all data and views submitted, and the Department welcomes suggestions which might aid in improving the standards in future revisions. Comments may be submitted to, and copies of standards and grading manuals obtained from:

Chief, Processed Products Branch  
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## United States Standards for Grades of Frozen Field Peas and Frozen Black-Eye Peas

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Authority:	Agricultural Marketing Act of 1946, Secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended (7 U.S.C. 1622, 1624).

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Note: Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

**§52.1661 Product description.**

**Frozen field peas and frozen Black-eye peas** called **frozen peas** in these standards, means the frozen product prepared from clean, sound, fresh, seed of proper maturity of the field pea plant (*Vigna sinensis*), by shelling, sorting, washing, blanching, and properly draining. The product is frozen and maintained at temperatures necessary for preservation. **Frozen peas** may contain succulent, unshelled pods (snaps) of the field pea plant as an optional ingredient used as a garnish.

**§52.1662 Styles.**

- (a) **Frozen peas.**
- (b) **Frozen peas with snaps.**

**§52.1663 Types.**

(a)

**Single type.** Frozen peas that have distinct similarities of color and shape for the type are not considered **mixed**. Single types include, but are not limited to, the following:

- (1) **Black-eye peas** or other similar varietal types, such as **Purple-hull peas**, that have a light colored skin, a definite eye (contrasting color around the hilum), and are bean shaped;
- (2) **Crowder peas** of various groups, such as **Brown Crowder**, that are nearly round in shape and have blunt or square ends;
- (3) **Cream peas** of various groups, including **White Acre**, that have a solid cream-colored skin and are generally bean shaped; and
- (4) **Field peas** means any varietal group or type of the field pea plant that has similar color and shape characteristics and includes **Black-eye peas**, **Crowder peas**, and **Cream peas**.

- (b) **Mixed type.** Frozen peas that are a mixture of two or more distinct single varietal groups or are not distinguishable as a single varietal group shall be considered **mixed** type.

**§52.1664 Definitions of terms.**

- (a) **Absolute limit (AL).** The maximum number of defects; or the minimum number of **color attributes** permitted in a sample unit.

- (b) **Acceptable quality level (AQL).** The maximum percent defective, or the maximum number of defects per hundred units; or the minimum percent **color attributes**, or the minimum number of **color attributes** per hundred units, that, for purposes of acceptance sampling inspection, can be considered satisfactory as a process average.
- (c) **Blemished.** Blemished means discolored, spotted, or damaged by any means to the extent that the appearance or eating quality is materially affected.
- (d) **Broken.** Broken means the skin or portions of the skin, the cotyledon or portions of the cotyledon, have become separated from the unit. **Broken** is not applicable to **snaps** in the style of **frozen peas with snaps**.
- (e) **Character.** Character refers to the maturity and tenderness of the frozen peas, including snaps. Character is determined after cooking the product by the **cooking procedure** described in **§52.1670**.
- (1) **Good character.** The units are tender and in a reasonably young stage of maturity and are practically uniform in texture and tenderness.
- (2) **Reasonably good character.** The units are reasonably tender and in a fairly young stage of maturity and may be variable in texture and tenderness; and the cotyledons may be mealy or firm but are not hard.
- (f) **Defect.** Any nonconformance with a specified requirement. Defects are classified as **minor**, **major**, **severe**, or **critical**.
- (g) **Deviant.** As applied to these standards, **deviant** means a sample unit that fails the requirements for the prerequisite factors of overall appearance, flavor and odor, freedom from grit, character, and freedom from broken peas; **Provided**, that such sample unit is not more than one grade below the intended or indicated grade.
- (h) **Dissimilar varieties.** In single types only, peas that are markedly different varietal colors and/or shapes. **Dissimilar varieties** is not applicable to snaps in the style of **frozen peas with snaps**.
- (i) **Harmless extraneous vegetable material.**
- (1) In the style of **frozen peas**:

- (i) Class 1. Hulls or pieces of unshelled pods (snaps), leaves, small tender stems, or other similar vegetable material; and
  - (ii) Class 2. Coarse, fibrous units of vegetable material which are harmless.
- (2) In the style of **frozen peas with snaps**:
  - (i) Class 1. Leaves, small tender stems, or other similar vegetable material, except **snaps**; and
  - (ii) Class 2. Coarse, fibrous units of vegetable material which are harmless.
- (j) **Flavor and odor.**
  - (1) **Good flavor and odor.** The product, after cooking, has a good, characteristic normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.
  - (2) **Reasonably good flavor and odor.** The product, after cooking, may be lacking in good flavor but is free from objectionable flavors and objectionable odors of any kind.
- (k) **Grit.** Sand, silt, or other earthy materials.
- (l) **Sample.** The number of sample units to be used for inspection of a lot.
- (m) **Sample unit.** The amount of product specified to be used for inspection. It may be:
  - (1) The entire contents of a container; or
  - (2) A portion of the contents of a container; or
  - (3) A combination of the contents of two or more containers; or
  - (4) A portion of unpacked product.
- (n) **Shriveled.** A unit that is seriously wrinkled in appearance, including **snaps**.
- (o) **Snap.** A succulent, unshelled pod of the field pea or Black-eye pea plant.
- (p) **Unit.** Any individual frozen pea; or any individual succulent, unshelled pod.

**§52.1665 Sample unit size.**

Compliance with requirements for all factors of quality is based on the following sample unit sizes:

- (a) White Acre** - 5 ounces (141.75 grams).
- (b)** All other types - 10 ounces (283.5 grams).

**§62.1666 Grades.**

- (a) U.S. Grade A** is the quality of frozen peas that:
  - (1)** Meets the following prerequisites (with deviants as specified in **§52.1673 (a)**):
    - (i)** Has a bright overall appearance;
    - (ii)** Has a good flavor and odor;
    - (iii)** Is practically free from grit;
    - (iv)** Has a good character;
    - (v)** Weight of broken peas does not exceed 0.25 ounce (7.1 grams) for **White Acre** peas and does not exceed 0.5 ounce (14.2 grams) for all other types; and
  - (2)** Is within the limits for defects as classified in Table I and specified in Tables II and III.
- (b) U.S. Grade B** is the quality of frozen peas that:
  - (1)** Meets the following prerequisites (with deviants as specified in **§52.1673 (a)**):
    - (i)** Has an overall appearance that may be dull but is not off-color;
    - (ii)** Has a reasonably good flavor and odor;
    - (iii)** Is practically free from grit;
    - (iv)** Has a reasonably good character;

- (v) Weight of broken peas does not exceed 0.5 ounce (14.2 grams) for **White Acre** peas and 1 ounce (28.35 grams) for all other types; and

- (2) Is within the limits for defects as classified in Table I and specified in Tables II and III.

- (c) **Substandard** is the quality of frozen peas that fail to meet the requirements for U.S. Grade B.

**§52.1667 Factors of quality.**

- (a) The grade of a sample of frozen peas is based on compliance with the prerequisites specified in **§52.1666** and with limits for the following quality factors.

- (1) Dissimilar varieties;
- (2) Harmless extraneous vegetable material;
- (3) Blemished units;
- (4) Shriveled units; and
- (5) Color attributes.

**§52.1668 Classification of defects and grade compliance.**

- (a) Defects are classified as **minor**, **major**, **severe**, or **critical**. Each **X** mark in Table I represents **one defect**.
- (b) Classification of defects:

**Table I**

Quality Factors	Defects	Classification			
		Minor	Major	Severe	Critical
Dissimilar Varieties	Each unit <u>1/</u>	X			
Harmless Extraneous Vegetable Material	Class 1 (Each Unit) <u>2/</u>			X	
	Class 2 (Each unit)				X
Blemished	Each Unit		X		
Shriveled	Each Unit	X			

1/ Not applicable to **mixed** types.

2/ Not applicable to **snaps** in the style of **frozen peas with snaps**.



(c) Grade compliance:

**Table II**

	Grade A				Grade B			
Absolute Limit (AL)	Maximum defects permitted							
	67	32	5	2	100	49	9	4
Number of Sample Units	Total <u>1/</u>	Major	Severe	Critical	Total <u>1/</u>	Major	Severe	Critical
	In the total sample							
1	60	26	3	0	91	42	6	2
2	114	48	6	1	174	77	11	3
3	167	69	8	2	256	113	15	5
4	219	90	10	2	337	147	19	6
5	271	110	11	3	417	182	22	7
6	322	131	13	3	497	216	26	8
7	373	151	15	4	577	250	30	9
8	425	171	17	4	657	284	33	10
9	476	192	19	4	736	318	37	11
10	526	212	20	5	816	352	41	11
11	577	232	22	5	895	385	44	12
12	628	252	24	5	974	419	48	13
13	679	272	25	6	1053	452	51	14
14	729	291	27	6	1132	486	55	15
15	780	311	29	6	1211	519	58	16
16	830	331	30	7	1290	553	62	17
17	881	351	32	7	1369	586	65	18
18	931	371	33	7	1447	619	69	19
19	981	390	35	7	1526	653	72	19
20	1032	410	37	8	1605	686	76	20
21	1082	430	38	8	1683	719	79	21
Acceptable Quality Level (AQL) <u>2/</u>	7.0	2.70	0.20	0.03	11.0	4.60	0.45	0.10

<sup>1/</sup> Total = Minor + major + severe + critical.

<sup>2/</sup> Based on an average count of 1400 units for **White Acre** peas and 700 units for all other types per 10 ounce package.

**§52.1669 Classification of color and grade compliance.**

- (a) General.** The requirement for **color attributes** is applicable for grade A classification only. **Color attributes** does not apply to units of **snaps** in the style of **Frozen peas with snaps**.
- (b) Color attributes.** Color attributes are defined as follows:

  - (1) Crowder peas** - Each unit with a color that is characteristic of very young peas.
  - (2) Field peas and mixed types** - Each unit with a color that is characteristic of very young peas ("black-eye peas" and "cream peas" are not considered.)
- (c) Compliance.** For the purposes of determining compliance with the requirements of grade A color, the applicable varietal type shall meet the acceptance numbers for color attributes in Table III.

**TABLE III**  
**Color Attributes**

Absolute Limit (AL)	Minimum number permitted	
	73	119
Number of sample units	Field peas, and mixed types	Crowder peas
1	84	133
2	175	276
3	268	421
4	362	566
5	456	712
6	551	859
7	646	1006
8	741	1153
9	837	1148
10	932	1596
11	1028	1596
12	1124	1744
13	1220	1892
14	1315	2040
15	1411	2188
16	1508	2336
17	1604	2485
18	1700	2633
19	1796	2782
20	1892	2930
21	1989	3079
Acceptable Quality Level (AQL) <sup>1/</sup>	14.0	21.50

<sup>1/</sup> Based on an average count of 1400 units for "White Acre" peas and 700 units for all other types per 10 ounce package.

**§52.1670 Determining flavor, odor, presence of grit, maturity, tenderness, and texture.**

- (a) General.** The cooking procedure is used to determine compliance with the requirements for flavor, odor, presence of grit, maturity, tenderness, and texture.
- (b) Cooking procedure.** Place 10 ounces (283.5 grams) of thawed product in a 2 quart (1.9 liter) sauce pan containing 400 milliliters of tap water (without the addition of salt) that has been brought to a boil. Continue to heat rapidly until the water begins to boil again. Cover the pan and boil for 40 minutes, reducing the heat to maintain a constant boil. Immediately after cooking, pour the product on to a flat receptacle and spread out to cool. The product should be evaluated for flavor, odor, presence of grit, maturity, tenderness, and texture while warm.

**§52.1671 Lot acceptance for style.**

In the style of **frozen peas with snaps**, the number of sample units that contain less than 3 snaps or more than 10 percent, by weight, of snaps shall not exceed the acceptance number specified in the sampling plans in the **Regulations Governing Inspection of Processed Fruits and Vegetables and Related Products (§52.38)**.

**§52.1672 Sample size.**

- (a) General.** The sample size to determine compliance with requirements for prerequisites specified in **§52.1666** and other quality factors, shall be as specified in the sampling plans and procedures in the **Regulations Governing Inspection of Processed Fruits and Vegetables and Related Products (§52.38)** for Lot Inspection or on-line Inspection, as applicable.
- (b) Deviants.** The acceptance numbers for deviants specified in the sampling plans cited in paragraph (a) of this section apply only to the prerequisite factors specified for the grade in **§52.1666**. They do not apply to the quality factors covered by the sampling plans in **§52.1668** and **§52.1669**.

**§52.1673 Lot acceptance for quality.**

A lot of frozen peas is considered as meeting the requirements for quality if:

- (a) The number of deviants for the prerequisites specified for the applicable grade in **§52.1666** does not exceed the acceptance number specified in the sampling plans in the **Regulations Governing Inspection of Processed Fruits and Vegetables and Related Products (§52.38)**.
- (b) The values permitted and the AL values for the applicable defect classifications specified in Tables II and III are not exceeded.

**§52.1674 Defect Tally.**

**Defect Tally for Frozen Field Peas and Frozen Black-Eye Peas**

No. size, and kind of container .....				
Label .....				
Container mark .....				
Net weight .....				
Sample unit No. ....				
Prerequisite grade .....				
Reason downgrade .....				
Defect	Minor	Major	Severe	Critical
Dissimilar varieties				
Blemished				
Shriveled				
Harmless Extraneous Vegetable Material				
Total (each class)				
Cumulative Total (each class)				
Total (all classes)				
Cumulative Total (all classes)				
Color				
Total (sample unit)				
Cumulative Total (sample)				

**Effective date and supersedure.** The United States Standards for Grades of Frozen Field Peas and Frozen Black-eye Peas (which is the fourth issue) contained in this subpart shall become effective October 15, 1996, and will thereupon supersede the United States Standards for Grades of Frozen Field Peas and Frozen Black-eye Peas which have been in effect since December 7, 1995.

Dated: September 6, 1996

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